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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,197	03/01/2002	Ajay Kumar	5681-11800	8610

7590 07/23/2004
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EXAMINER

HWANG, JOON H

ART UNIT	PAPER NUMBER
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2172

4

DATE MAILED: 07/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/087,197

Applicant(s)

KUMAR ET AL.

Examiner

Joon H. Hwang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The pending claims are 1-20.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Bauer et al. (U.S. Patent No. 5,884,325).

With respect to claim 1, Bauer discloses a central database of a server (a distributed store) comprising a primary state of session data configured for access by a plurality of client nodes (a plurality of application servers), wherein the session data comprises a plurality of attributes (line 50 in col. 1 thru line 67 in col. 2, lines 13-25 in col. 4, fig. 1, and fig. 2). Bauer discloses a first client node (a first application server) of the plurality of client nodes (application servers), comprising a client state of the session data accessible to processes executing within the application server, wherein the first client node (a first application server) is configured to track accesses of the attributes of the client state (line 50 in col. 1 thru line 67 in col. 2, lines 57-67 in col. 6, line 66 in col. 7 thru line 17 in col. 8, lines 58-64 in col. 8, fig. 1, and fig. 2). Bauer discloses the distributed store is configured to synchronize the primary state with the client state

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according to the tracked accessed attributes (line 50 in col. 1 thru line 67 in col. 2 and lines 22-53 in col. 9).

With respect to claim 2, Bauer teaches the first client node (the first application server) is configured to store information identifying the accessed attributes to track accesses of the attributes of the client state (line 50 in col. 1 thru line 67 in col. 2, lines 22-67 in col. 9, and lines 1-5 in col. 10).

With respect to claim 3, Bauer teaches the first client node (the first application server) is configured to track mutable attributes to track accesses of the attributes of the client state (line 50 in col. 1 thru line 67 in col. 2, lines 22-67 in col. 9, and lines 1-5 in col. 10).

With respect to claim 4, Bauer discloses the central database of the server (a distributed store) is configured to synchronize only mutable attributes to synchronize the primary state with the client state (line 50 in col. 1 thru line 67 in col. 2, lines 22-67 in col. 9, and lines 1-5 in col. 10).

With respect to claim 5, Bauer teaches the first client node (the first application server) is configured to perform a comparison of the tracked accessed attributes and a before-image data (a benchmark of the session data) comprising a previous version of the one or more attributes to determine a subset of the tracked accessed attributes that are modified in respect to the before-image data (the benchmark of the session data) and the central database of the server (the distributed store) is configured to update the primary state with the subject of the accessed attributes that have been modified to

synchronize the primary state with the client state (line 50 in col. 1 thru line 67 in col. 2, lines 31-50 in col. 3, lines 22-67 in col. 9, and lines 1-5 in col. 10).

The limitations of claim 8 are rejected in the analysis of claim 1 above, and the claim is rejected on that basis.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (U.S. Patent No. 5,884,325) in view of Morris (U.S. Patent No. 5,813,017).

With respect to claim 6, Bauer discloses the claimed subject matter as discussed above. Bauer further discloses many other comparison methods for determining modifications since a last synchronization (lines 42-53 in col. 9). Bauer does not explicitly disclose a binary comparison. However, Morris discloses a binary comparison for determining differences for database synchronization (abstract and line 47 in col. 11 thru line 13 in col. 12). Therefore, based on Bauer in view of Morris, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Morris to the system of Bauer for a binary comparison in order to determine differences of two versions of data for an effective database synchronization.

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6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (U.S. Patent No. 5,884,325) in view of Lin et al. (U.S. Patent No. 6,546,135).

With respect to claim 7, Bauer discloses the claimed subject matter as discussed above. Bauer further discloses many other comparison methods for determining modifications since a last synchronization (lines 42-53 in col. 9). Bauer does not explicitly disclose an object graph comparison. However, Lin discloses comparing data differences using DAG (directed acyclic graph) representation, which teaches an object graph comparison (abstract, line 40 in col. 7 thru line 14 in col. 8, and fig. 5). Therefore, based on Bauer in view of Lin, it would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the teachings of Lin to the system of Bauer for an object graph comparison in order to determine differences of two versions of data for an effective database synchronization.

7. Claims 9-14 are essentially the same as claims 1-7 except that it sets forth the claimed invention as a method rather than a system and rejected for the same reasons as applied hereinabove.

8. Claims 15-20 are essentially the same as claims 1-7 except that it sets forth the claimed invention as an article of manufacture rather than a system and rejected for the same reasons as applied hereinabove.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joon H. Hwang whose telephone number is 703-305-6469. The examiner can normally be reached on 9:30-6:00(M~F).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JOHN E BREENE can be reached on 703-305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Joon Hwang
7/19/04


JEAN M. CORRIELUS
PRIMARY EXAMINER